

**The National Institute on Aging and
The National Institute on Drug Abuse
Intramural Research Programs**

Present

2004 Summer Student Poster Day

Tuesday, August 3, 2004

Poster Presentations

1:00 P.M. - 5:00 P.M.

**Gerontology Research Center
Lobby and Rooms 1-117 and 1-D-12**

Light Refreshments Will be Served

NATIONAL INSTITUTE ON AGING

Clinical Research Branch

(1) Jun Shoji (Junior)

The Johns Hopkins University - Baltimore, MD

Serum Biomarkers in Animal Models of Arthritis and Physical Inactivity: A Proteomic Approach

Mentor: Shari Ling, M.D.

Laboratory of Cardiovascular Science

(2) Amanda D. French (Senior)

University of Maryland - College Park, MD

MCP-1 Induces TGF- β 1 Activation in Vascular Smooth Muscle Cells: Implication for Age-Associated Arterial Remodeling

Mentor: Gaia Spinetti, Ph.D.

(3) Salihah A. Dick (Senior)

Barry University - Miami Shores, FL

New Insights from Transcriptome and qRT-PCR Analyses Implicate Altered Cysteine Metabolism in Heart Failure, Hypertension and Aging

Mentors: Kenneth Boheler, Ph.D., and Maria Volkova, Ph.D.

Laboratory of Cellular and Molecular Biology

(4) Kyle J. Hewitt (Senior)

The Colorado College - Colorado Springs, CO

Identification of Cellular Pathways in Ovarian Cancer Using High Throughput Reporter Assays

Mentor: Patrice Morin, Ph.D.

(5) Ankita Sharma (Senior)

Brandeis University - Waltham, MA

Andrew H. Clark (Sophomore)

University of Maryland, Baltimore County - Baltimore, MD

A Search for Regulatory Sequences in the DH Cu Locus

Mentor: Ranjan Sen, Ph.D.

(6) Stacey B. Dutton (Senior)

University of Maryland Eastern Shore - Princess Anne, MD

The Identification of DJ Regions in Different Cell Lines

Mentor: Ranjan Sen, Ph.D.

Laboratory of Clinical Investigation

(7) Donnetta S. McFadden (Sophomore)

University of Maryland, Baltimore County - Baltimore, MD

A Wavelet-Based Biomarker for Atropine Effects on Heart Rate Variability

Mentors: Darrell Abernethy, M.D., Ph.D., and Donald Mager, Pharm.D.

(8) Dalia Saha (Sophomore)

Brown University Medical School - Prov., RI

Electrophysiological Properties of Smooth Muscle Cells: Specific Alpha-1c Isoforms of the Human Ca_v1.2 gene

Mentor: Nikolai Soldatov, Ph.D.

(9) Donnell S. Newman Jr. (1st Year)

University of Kansas School of Medicine - Kansas City, KS

Peptide YY (a gut-produced satiety factor) Secretion in Lean and Obese Subjects

Mentors: Josephine Egan, M.D., and Olga Carlson, Ph.D.

(10) Shalandus L. Harris (Senior)

Tennessee State University - Nashville, TN

High Performance Liquid Chromatography of Water-Soluble and Fat-Soluble Vitamins

Mentors: Maria Rodriguez, Ph.D., and Irving Wainer, Ph.D.

(11) Patrick Hyppolite (Senior)

SUNY College of Old Westbury - Old Westbury, NY

Conformational Mobility of the $\alpha 7$ Nicotine Receptor

Mentor: Irving Wainer, Ph.D.

Laboratory of Experimental Gerontology

(12) Demetrio Sierra Jr. (Senior)

University of Texas at San Antonio - San Antonio, TX

Effects of Dietary Trends on Neuroprotection

Mentors: Rafael de Cabo, Ph.D., and Bryan Devan, Ph.D.,

(13) Lupe P. Ceballos (Senior)

University of California Riverside - Riverside, CA

In Vivo vs. In Vitro Effects of Caloric Restriction on B16F10 Melanoma Cell Growth

Mentor: Rafael de Cabo, Ph.D.

Laboratory of Genetics

(14) Sara C. Di Rienzi (Junior)

Bryn Mawr College - Bryn Mawr, PA

Mutation Analysis in Classical and Hypermobility Ehlers-Danlos Patients

Mentor: Clair Francomano, M.D.

(15) Lauren E. Wilson (Freshman)

Hamilton College - Clinton, NY

Analysis of FA Pathway in Tumor Cell Lines

Mentor: Peiwen Fei, Ph.D.

(16) Ajish George (Senior)

Rensselaer Polytechnic Institute - Troy, NY

Characterization of Promoters of Co-regulated Genes by Cis-factor Analysis

Mentor: Alexei Sharov, Ph.D.

(17) Benjamin D. Earley (Senior)

The Park School - Brooklandville, MD

Sex and Mutation Status - Verification of Tabby Mouse Embryos and Gene Profiling of Embryonic Skin

Mentor: Chang-Yi Cui, M.D., Ph.D.

Laboratory of Immunology

(18) Tara C. Blake (Senior)

Loyola College in Maryland - Baltimore, MD

Ghrelin Expression and Function in Human T Cells

Mentors: Vishwa Dixit, Ph.D., and Dennis Taub, Ph.D.

(19) Melissa N. Lansey (Junior)

University of Maryland Eastern Shore - Princess Anne, MD

Comparisons of Two Delivery Approaches for Chemoattractant DNA

Mentor: Arya Biragyn, Ph.D.

(20) Nicholas Chun (Junior)

Massachusetts Institute of Technology - Cambridge, MA

Chromatin Remodeling and Transcriptional Regulation in Naive and Memory T-cells

Mentors: Monchou Fann, Ph.D., and Nan-ping Weng, Ph.D.

Laboratory of Molecular Gerontology

(21) Hoda Eydgahi (Sophomore)

Virginia Commonwealth University - Richmond, VA

Lentivirus-mediated Knockdown of Werner Syndrome Protein

Mentor: Jeanine Harrigan, Ph.D.

(22) Fernando Gomez (Senior)

California State University Long Beach - Long Beach, CA

Microarray Transcription Profile of ogg1 and nth1 Knockout Mice

Mentor: Nadja Souza-Pinto, Ph.D.

(23) Shamika C. Danzy (Sophomore)

Georgia Institute of Technology - Atlanta, GA

DNA Repair Pathways in Telomeric DNA

Mentors: Patricia Opresko, Ph.D., and Vilhelm Bohr, M.D., Ph.D.

(24) Sean A. Clarke (Senior)

University of Maryland Eastern Shore - Princess Anne, MD

A Functional Analysis of the Werner Syndrome Protein by Genetic Complementation Studies in *S. Cerevisiae*

Mentors: Robert Brosh, Ph.D., and Kevin Doherty, Ph.D.

Laboratory of Neurogenetics

(25) Crystal R. Wilson (1st Year)

University of North Carolina-Chapel Hill - Chapel Hill, NC

Genome-Wide Linkage Screen in a Large Family with Autosomal-Dominant Dystonia1

Mentors: Dena Hernandez, B.S., and Andy Singleton, Ph.D.

Laboratory of Neurosciences

(26) Abhay R. Kumar (Senior)

New York University - New York, NY

A Possible Neuroprotective Role of the Dicer Pathway

Mentors: Stephen Chan, Ph.D., and Mark Mattson, Ph.D.

(27) Lisa E. Philipose (1st Year)

Johns Hopkins University School of Medicine - Baltimore, MD

Comparison of the Regeneration Potential of Human Schwann Cells versus Human Astrocytes

Mentor: Mahendra Rao, Ph.D.

(28) Andrea L. Wilson (Sophomore)

Hiram College - Hiram, OH

Examining the Effect of Insulin-like Signaling on Muscle Aging in *C. elegans*

Mentor: Cathy Wolkow, Ph.D.

(29) David Cantu (Senior)

The University of Texas at San Antonio - San Antonio, TX

Developmental Expression of Gamma Secretase in Mouse Brain

Mentor: Dong-Gyu Jo, Ph.D.

(30) Isaac L. Elam (Junior)

Brigham Young University-Idaho - Rexburg, ID

Preclinical Studies Suggest that Serum Lipid Peroxides and Ceramides are Potential Diagnostic Markers of the Onset, Progression, and Treatment of ALS1

Mentor: Roy Cutler, M.S.

(31) Lisa Kebejian (Junior)

Columbia University - New York, NY

Analysis of Potential Cognitive and Neurochemical Abnormalities Associated with Triple-transgenic Alzheimer's Disease Mice

Mentors: Bronwen Martin, Ph.D., and Veerendra K. Madala Halagappa, Ph.D.

Laboratory of Personality and Cognition

(32) Hava Tillipman (1st Year)

University of Maryland School of Medicine - Baltimore, MD

Redesign of the USDA Food Store Survey Instrument for HANDLS: Assessing Availability and Affordability of Food in Baltimore Retail Outlets

Mentor: Melissa Kitner-Triolo, Ph.D.

(33) Daianna M. Adams Zambrana (Senior)

Pontifical Catholic University of Puerto Rico - Ponce, PR

Development of a Neighborhood Assessment Tool for HANDLS: Can a Refinement of a Validated Tool Produce Reproducible Results That May Help Disentangle the Effects of Urban Life on Health in Baltimore?

Mentor: Melissa Kitner-Triolo, Ph.D.

NATIONAL INSTITUTE ON DRUG ABUSE

Behavioral Neuroscience Research Branch

(34) Adam J. Setren (Sophomore)

Vanderbilt University - Nashville, TN

Gene Expression in Laser-microdissected Rat Striatal Neurons Selectively Activated during Acute Cocaine-induced Behavior

Mentor: Bruce Hope, Ph.D.

(35) Maya E. Holt-Brockenbrough (Senior)

Wellesley College - Wellesley, MA

Double-labeling for Cocaine-induced Fos and Choline Acetyltransferase and Parvalbumin in Rat Striatal Interneurons Following Repeated Cocaine Administrations in a Novel Environment

Mentor: Bruce Hope, Ph.D.

(36) Shari L. Long (Junior)

Episcopal Academy - Merion, PA

Double-labeling for Cocaine-induced Fos and NADPH Diaphorase in Rat Striatal Interneurons Following Repeated Cocaine Administrations in a Novel Environment

Mentor: Bruce Hope, Ph.D.

(37) David J. Kuraguntla (Senior)

Grove City College - Grove City, PA

Measurement of the Binding and Uptake by the Human Dopamine Transporter Utilizing a Fluorescent Substrate, ASP+(4-4-dimethylaminostyryl-N-methylpyridinium): A Live Cell Confocal Study

Mentors: Bronwyn Kivell, Ph.D., and Toni Shippenberg, Ph.D.

(38) Michael E. Kiyatkin (Freshman)

Dulaney High School - Timonium, MD

Effects of the NAALADase Inhibitor 2-PMPA on Cocaine-Triggered Reinstatement of Drug-Seeking Behavior

Mentors: Eliot Gardner, Ph.D., and Zheng-Xiong Xi, M.D., Ph.D.

(39) Jessica E. Baxley (Freshman)

Notre Dame Preparatory School - Towson, MD

Footshock-induced Reinstatement of Cocaine Seeking Behavior is Associated with Increases in Corticotropin-releasing Factor, Glutamate and Dopamine Levels in the Ventral Tegmental Area of Rats

Mentors: Zhi-Bing You, Ph.D., and Bin Wang, Ph.D.

(40) Sean I. Sheffler-Collins (Junior)
University of Maryland - College Park, MD
Effect of Microinjections of an MHC-I Antibody into the Basolateral Amygdala on Fear Conditioning in Rats
Mentor: Yavin Shaham, Ph.D.

(41) Alexander D. Pham (Sophomore)
Drexel University College of Medicine - Philadelphia, PA
Does the Administration of GABA Antagonists into the Supramammillary Nucleus Induce Sensitized Locomotion?
Mentor: Satoshi Ikemoto, Ph.D.

Cellular Neurobiology Research Branch

(42) Julia L. Punch (Senior)
Appalachian State University - Boone, NC
Assessing Gene Expression Changes in Post-mortem Orbitofrontal Cortex from Drug Abusers: Validation of cDNA Microarray Results Using Semi-quantitative Polymerase Chain Reaction (QPCR)
Mentors: William Freed, Ph.D., and Elin Lehrmann, Ph.D.

(43) Ronald M. Warren (Senior)
Saint Josephs Preparatory High School - Philadelphia, PA
Regulation of Tumor Necrosis Factor Alpha (TNF-alpha) by Cocaine in Primary Human Astrocytes
Mentors: Chun-Ting Lee, Ph.D., and William Freed, Ph.D.

(44) Ricardo Q. Ilias (Junior)
Westlake High School - Atlanta, GA
GAD65 Promoter Induced Expression of hrGFP
Mentors: Mark Coggiano, M.S. and William Freed, Ph.D.

(45) Alice M. Macgill (Senior)
Oberlin College - Oberlin, OH
Pharmacological Analysis of Cannabinoid Receptor Antagonists in the Hippocampus
Mentors: Carl Lupica, Ph.D., and Alex Hoffman, Ph.D.

Clinical Pharmacology and Therapeutics Research Branch

(46) Mary K. Murphy (Senior)
Yeshiva University/Albert Einstein Campus - Bronx, NY
Plasma Butyrylcholinesterase Activity in Cocaine Users
Mentors: David Gorelick, M.D., Ph.D. and Marc Copersino, Ph.D.

(47) Renee V. Ervin (Junior)

Towson University - Towson, MD

Effect of Nicotine Deprivation on an Attentional Blink Task

Mentor: Stephen Heishman, Ph.D.

(48) Heather M. Andes (Junior)

Loyola College - Baltimore, MD

Comparison of Active Imagery versus In vivo Cues in Eliciting Tobacco Craving Responses

Mentor: Stephen Heishman, Ph.D.

(49) Amelia C. Mackenzie (Freshman)

University of College Park - College Park, MD

The Effects of Smoking Withdrawal and Dependence on Computer Assessed Cognitive Performance

Mentor: Wallace Pickworth, Ph.D.

Medications Discovery Research Branch

(50) Jonathan A. Godin (Sophomore)

Johns Hopkins University - Baltimore, MD

Possible Evidence for Allosteric Modulation of the Mu Opioid Receptor by the Kappa

Agonist, Salvinorin A

Mentors: Richard Rothman, M.D., Ph.D., and Chris Dersch, M.S.

(51) Grace Crocket (Junior)

University of Michigan - Ann Arbor, MI

Dopamine Directed Microdialysis

Mentors: Gianluigi Tanda, Ph.D., and Jonathan Katz, Ph.D.

(52) Tovah I. Dorsey (Senior)

St. Paul's School for Girl's - Brooklandville, MD

Behavioral Effects of Benztropine Analogs

Mentor: Jonathan Katz, Ph.D.

(53) LaTeira Haynes (Junior)

Suncoast Community High School - Riviera Beach, FL

The Effect of Kappa Agonist Treatment on G Protein Expression in CHO cells

Expressing Human Kappa Opioid Receptors

Mentors: Richard Rothman, M.D., Ph.D., and Heng Xu, Ph.D.

(54) Sarah LJ. Husband (Senior)

Northern Arizona University - Flagstaff, AZ

Molecular Tools for the Pharmacological Evaluation of D2-like Receptors

Mentors: Amy Newman, Ph.D., and Peter Grundt, Ph.D.

Molecular Neurobiology Research Branch

(55) Paige L. Felts (Senior)

Joppatowne High School - Joppa, MD

Are Apparent Nociceptive Deficits in NET/SERT Double Knockout Mice the Result of Confounding Motor Impairment?

Mentor: Frank Hall, Ph.D.

(56) Andrew L. Breeden (Sophomore)

University of Richmond - Richmond, VA

Corticolimbic Activation Patterns Relate to Impulsivity: An O15 PET study

Mentors: Denni Fishbein, Ph.D., and George Uhl, M.D., Ph.D.

Molecular Neuropsychiatry Research Branch

(57) Matthew W. Mahr (Sophomore)

University of Rhode Island - Kingston, RI

Dangers of Internet Drug Abuse

Mentors: CAPT Anthony Brooks, P.D., and CDR Paul Na, P.D.

(58) Melissa Lewis R. Lewis (Junior)

Johnson C. Smith University - Charlotte, NC

Benzodiazepines: Potential Derivative Synthesis, Biological Receptors, and History of Abuse

Mentors: Anthony Brooks, P.D. and Paul Na, P.D.

(59) George C. Wang (Sophomore)

Stanford University - Stanford, CA

9-cis Retinoic Acid Induces Neuroregeneration in Stroke Rats

Mentor: Barry Hoffer, M.D., Ph.D.

(60) Monica Johnson (Sophomore)

Lebanon Valley College - Annville, PA

Pretreatment with an Escalating Doses of Methamphetamine Induce Neuroprotection

Mentors: Devon Graham, B.S., and Jean Lud Cadet, M.D.

(61) Ashlei N. Alston (Sophomore)

Hampton University - Hampton, VA

Analysis of Gene Expression in the Postnatal Rat Hippocampus Following in-utero Exposure to Ecstasy (MDMA)

Mentors: Johnalyn Lyles, B.S., and Jean Cadet, M.D.

(62) Gladys Santiago (Senior)

University of Puerto Rico, Río Piedras Campus - San Juan, PR

Effects of In Utero Methamphetamine Exposure on Global Gene Expression in the Frontal Cortex of Male Rat Pups

Mentors: Jean-Lud Cadet, M.D., and Pierre-Antoine Noailles, Ph.D.